

**Amendments to the Drawings:**

The attached sheets of drawings, which include Figs. 1-4, replace the original sheets including Figs. 1-4.

Attachment: Replacement Sheets 1-4

## **REMARKS/ARGUMENTS**

### **I. Introduction:**

Claims 1, 12, 14, 16, and 25 are amended and claims 2, 13, 17, 26, and 33-36 are canceled herein. With entry of this amendment, claims 1, 3-12, 14-16, 18-25, and 27-32 will be pending.

### **II. Information Disclosure Statement:**

A supplemental Information Disclosure Statement with a corrected publication number for US Patent Publication No. 2002/0067693 (Kodialam et al.) is filed herewith.

### **III. Drawings:**

Formal drawings are submitted herewith. The Examiner objected to the drawings because reference character "106" was used to designate several items in Fig. 1. Applicants note that reference number "106" is only used to identify a network interface (two of which are shown in Fig. 1).

### **IV. Claim Rejections – 35 U.S. 102 and 103:**

Claims 1, 4, 5, 7, 12, 16, 19, 20, 25, 28, and 29 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2002/0172149 (Kinoshita et al.).

Claims 1, 12, 16, and 25, have been amended to include the limitations of dependent claims 2, 13, 17, and 26, respectively.

Claims 2, 3, 6, 8, 11, 13-15, 17, 18, 21, 26, 27, and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. and Kodialam et al.

The Kinoshita et al. patent is directed to a method and apparatus for protection path setup. Bandwidth is shared among protection paths only if there is no possibility that any

of the protection paths will be used simultaneously (see, for example, paragraphs 72 and 73). As noted by the Examiner, Kinoshita et al. fail to teach a method wherein bandwidth to be protected of a link pair comprises a lesser of primary bandwidths of links of said link pair.

Kodialam et al. disclose dynamic backup routing of network tunnel paths for local restoration in a packet network. In rejecting claim 2, the Examiner refers to paragraph 0055 of the Kodialam et al. patent. This paragraph describes how two links which are not both in active and backup paths are disjoint. More specifically, this section of the patent describes how current demands may be backup up on a link without reserving additional backup if certain conditions are met. There is an amount of backup capacity on a link  $l(u,v)$  that is reserved for backup paths of previously routed demands that use a different link  $l(i,j)$ . This amount cannot be used to backup the current demand if it were to also use link  $l(i,j)$  in the active path. Kodialam et al. further defines an equation to determine if the current demands may be backed up on link  $l(u,v)$  without reserving additional bandwidth. The equation can be described as follows. If the set of demands that use link  $l(i,j)$  on the active path and link  $l(u,v)$  on the backup path plus the current bandwidth demand are less than or equal to the total amount of bandwidth reserved for backup path demands whose backup paths use link  $l(u,v)$ , then the current demands may be backed up on link  $l(u,v)$  without reserving any additional bandwidth. There is no discussion of defining bandwidth to be protected of a link pair as a lesser of primary bandwidths of links of the link pair, as set forth in amended claims 1, 12, 16, and 25.

Accordingly, claims 1, 12, 16, and 25, and the claims depending therefrom, are submitted as patentable over Kinoshita et al. and Kodailam et al.

With respect to claims 8, 15, 21, and 30, the Examiner notes that Kinoshita et al. fail to teach back tunnels and wherein there is at least one set of backup tunnels that protect disparate nodes and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool. In rejecting these claims, the Examiner refers to paragraphs 0030 and 0060 of Kodialam et al. Paragraph 0030 describes intra-demand and inter-demand sharing of the capacity of a backup path. Inter-demand sharing refers to sharing of the backup bandwidths belonging to two different demands. Intra-

demand sharing refers to sharing of capacity between backup links on the backup path for a demand when the links in the active paths have backup links/paths with some links in common. Intra-demand is further described at paragraph 0031 with respect to Fig. 3. Link l(8,4) is common to backup paths that backup links l(2,3) and l(3,4). Thus, backup capacity is shared on link l(8,4) as an example of intra-demand sharing. As shown in Fig. 3, intra-demand sharing covers a backup link that protects paths having the same node 303. Paragraph 0060 describes backup routing for a link failure and accounting for intra-demand sharing of backup bandwidth. Kodialam et al. do not show or suggest wherein there is at least one set of backup tunnels that protect disparate nodes and that consume more bandwidth on at least one link than provided by said at least one link's backup bandwidth pool.

Accordingly, claims 8, 15, 21, and 30, and the claims depending therefrom, are submitted as patentable over Kinoshita et al. and Kodialam et al.

V. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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